Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A game machine comprising:

a controller of a target, the target including at least four ~~known points defining a plane~~characteristic points on a defined plane;

an image sensor having an image plane on which an image of ~~the known points of the target are formed~~including the four characteristic points at a predetermined position of the image plane corresponds to a target point;

a processor that calculates an attitude of the image plane relative to ~~the plane defined by the known points of the target~~the defined plane on the basis of the output of the image sensor including the information of the positions of the ~~image of the known points~~ four characteristic points on the image ~~plane~~plane; and

a signal generator that generates a signal to be transmitted to the controller to cause a change in the target depending on the attitude calculated by the processor.

2. (Original) The game machine according to claim 1, wherein the target includes a real object, wherein the controller causes a movement of the real object depending on the attitude calculated by the processor in response to the signal from the signal generator.

3. (Currently Amended) The game machine according to claim 1, wherein the controller includes an image display that displays an image of the target on a display plane~~, the display plane corresponding to the plane defined by the known points~~.

4. (Original) The game machine according to claim 3, wherein the image display includes an image projector for projecting an image on a screen, the screen corresponding to the display plane.

5. (Canceled)

6. (Canceled)

7. (Currently Amended) The game machine according to ~~claim 5~~claim 1, further comprising a range finder that measures the distance from the image sensor to the ~~display~~defined plane, wherein the controller causes ~~the~~a change in the image on the display further depending on the range finder.

8. (Original) The game machine according to claim 1, wherein the controller causes a movement of the target depending on the attitude calculated by the processor in response to the signal from the signal generator.

9. (Currently Amended) The game machine according to claim 1, wherein the processor further calculates the position of a target point on the display plane, ~~the image of which is formed at a predetermined position on the image plane,~~ on the basis of the attitude and the output of the image sensor including the information of the positions of ~~the known points~~the characteristic points and wherein the signal generator generates the signal further depending on the position calculated by the processor.

10. (Currently Amended) The game machine according to claim 1, wherein the processor includes a first processor for calculating ~~a first data~~parameters of the attitude on the basis of the positions of the ~~image of the known~~characteristic points on the image plane, and a second processor for calculating ~~a second data~~a position of the target point on the basis of ~~the first data~~the parameters of the attitude and the positions of the ~~image of the known~~ characteristic points on the image plane~~, the attitude being given on the basis of the second data~~.

11. (Currently Amended) A game machine comprising:

an image display for displaying an image of a target with at least four ~~known~~ characteristic points on a display plane;

an image sensor having an image plane on which an image of ~~the known points are formed~~the four characteristic points at a predetermined position of the image plane corresponds to a target point;

_____a processor for calculating an attitude of the image plane relative to the display plane on the basis of the output of the image sensor including the information of the positions of ~~the image of the known~~the four characteristic points on the image plane; and

_____a signal generator for generating a signal to be transmitted to the image display to cause a change in the image of the target on the display plane depending on ~~the~~ parameters of the attitude calculated by the processor.

12. (Original) The game machine according to claim 11, further comprising a range finder that measures the distance from the image plane to the display plane, wherein the signal generator generates the signal further depending on the distance measured by the range finder.

13. (Currently Amended) The game machine according to claim 11, wherein the processor further calculates the position of a target point on the display plane, ~~the image of which is formed at a predetermined position on the image plane,~~ on the basis of the parameters of the attitude and the output of the image sensor including the information of the positions of ~~the known points the known points,~~the four characteristic points, and wherein the signal generator generates the signal further depending on the position calculated by the processor.

14. (Currently Amended) The game machine according to claim 11, wherein the processor includes a first processor for calculating ~~a first data~~ the parameters of the attitude on the basis of the positions of the ~~image of the known~~ characteristic points on the image plane, and a second processor for calculating ~~a second data~~ the position of the target point on the basis of ~~the first data~~the parameters of attitude and the positions of the ~~image of the~~

~~known~~four characteristic points on the image plane~~, the attitude being given on the basis of the second data~~.

15. (Currently Amended) A game machine comprising:

_____an image display for displaying an image of a target point on a display plane with at least four ~~known~~ characteristic points;

_____an image sensor having an image plane on which an image of ~~the display plane is formed with the known points included in the image~~ the four characteristic points at a predetermined position of the image plane corresponds to a target point;

_____a processor for calculating the position of a point on the display plane, ~~the image of which is formed at a predetermined position on the image plane, on the basis of the output of the image sensor including the information of the positions of the known points~~on the basis of the positions of the four characteristic points on the image plane;

_____a comparator for comparing the position of the target point with the position calculated by the processor; and

_____a signal generator for generating a signal to be transmitted to the image display to cause a change in the image of the target point on the display plane in response to the comparator.

16. (Currently Amended) The game machine according to claim 15, wherein the signal generator transmits the signal to cause the change in the image when the comparator finds that ~~the distance from the position calculated by the processor to the position of the target point is less than a limit~~the position calculated by the processor is relative to the position of the target.

17. (Currently Amended) The game machine according to claim 16, further comprising a sighting device for ~~the image of~~ aiming the target point on the display plane~~, wherein the image of the target point is formed at the predetermined position on the image~~

~~plain if the image of the target point on the display plane is correctly sighted by the sighting device~~.

18. (Original) The game machine according to claim 17, wherein the sighting device includes a monitor of field of view given by the image sensor with an indicia positioned at a position in the field of view corresponding to the predetermined position on the image plane.

19. (Original) The game machine according to claim 17, wherein the sighting device includes an additional device capable of sighting the image of the target on the display plane with the image sensor not utilized.

20. (Currently Amended) The game machine according to claim 15, wherein the processor includes a first processor for calculating ~~a first data~~parameters of attitude on the basis of the positions of the ~~image of the known~~four characteristic points on the image plane, and a second processor for calculating ~~a second data~~a position of the target point on the basis of ~~the first data~~the parameters of the attitude and the positions of the ~~image of the known~~four characteristic points on the image plane~~, the attitude being given on the basis of the second data~~.

21. (Currently Amended) A game machine comprising:

an image display for displaying an image of a virtual reality space with at least four ~~known~~ characteristic points on a display plane;

an image sensor having an image plane on which an image of ~~the known points are formed~~the four characteristic points at a predetermined position of the image plane corresponds to a target point;

a processor for calculating parameters of an attitude of the image plane relative to the display plane on the basis of the output of the image sensor including the information of the positions of ~~the image of the known~~ the four characteristic points on the image plane; and

_____a signal generator for generating a signal to be transmitted to the image display to cause a change in the image of the virtual reality space on the display plane depending on the attitude calculated by the processor.

22. (Original) The game machine according to claim 21, further comprising a range finder that measures the distance from the image plane to the display plane, wherein the signal generator generates the signal further depending on the distance measured by the range finder.

23. (Currently Amended) The game machine according to claim 22, wherein the processor further calculates the position of a target point on the display plane, ~~the image of which is formed at a predetermined position on the image plane,~~ on the basis of the parameters of attitude and the output of the image sensor including the information of the positions of ~~the known points~~the four characteristic points, and wherein the signal generator generates the signal further depending on the position calculated by the processor.

24. (Currently Amended) The game machine according to claim 21, wherein the processor includes a first processor for calculating ~~a first data~~ the parameters of the attitude on the basis of the positions of the ~~image of the known~~ four characteristic points on the image plane, and a second processor for calculating ~~a second data~~ a position of the target point on the basis of ~~the first data~~ the parameters of the attitude and the positions of the ~~image of the known~~four characteristic points on the image plane~~, the attitude being given on the basis of the second data~~.

25. (Currently Amended) A method of performing a game with a controller of a target, the target including at least four ~~known~~ characteristic points ~~defining a plane~~ and an image sensor having an image plane on which an image of ~~the known points of the target are formed~~ the four characteristic points at a predetermined position of the image plane corresponds to a target point; the method comprising the steps of:

_____calculating parameters of an attitude of the image plane relative to the display plane ~~defined by the known points of the target~~ on the basis of ~~the~~ output of the image sensor including the information of the position~~positions~~ of the ~~image of the known~~four characteristic points on the image plane; and

_____generating a signal to be transmitted to the controller to cause a change in the target depending on the attitude calculated by the processor.

26. (Original) A computer-readable medium having computer-executable instructions for performing the steps recited in claim 25.

27. (Currently Amended) A method of performing a game with a an image display for displaying an image of a target with at least four ~~known~~characteristic points ~~defining a plane~~ and an image sensor having an image plane on which an image of ~~the known points of the target are formed~~the four characteristic points at a predetermined position of the image plane corresponds to a target point, the method comprising the steps of:

_____calculating parameters of an attitude of the image plane relative to the display plane on the basis of the output of the image sensor including the information of the positions of the ~~image of the known~~four characteristic points on the image plane; and

_____generating a signal to be transmitted to the image display to cause a change in the image of the target on the display plane depending on the attitude calculated by the processor.

28. (Original) A computer-readable medium having computer-executable instructions for performing the steps recited in claim 27.

29. (Currently Amended) A method of performing a game with a an image display for displaying an image of ~~a target point~~a target on a display plane with at least four ~~known~~characteristic points ~~defining a plane~~ and an image sensor having an image plane on which an image of ~~the known points of the target are formed~~the four characteristic points at a

predetermined position of the image plane corresponds to a target point, the method comprising the steps of:

_____calculating the position of a target point on the display plane, ~~the image of which is formed at a predetermined position on the image plane,~~ on the basis of the output of the image sensor including the information of the positions of the ~~known~~four characteristic points;

_____comparing the position of the target point with the position calculated by the processor; and

_____generating a signal to be transmitted to the image display to cause a change in the image of the target ~~point~~ on the display plane in response to the comparator.

30. (Original) A computer-readable medium having computer-executable instructions for performing the steps recited in claim 29.

31. (Currently Amended) A method of performing a game with an image display for displaying an image of a virtual reality space with at least four ~~known~~ characteristic points ~~defining a plane~~ and an image sensor having an image plane on which an image of ~~the known points of the target are formed~~the four characteristic points at a predetermined position of the image plane corresponds to a target point, the method comprising the steps of:

_____calculating parameters of an attitude of the image plane relative to the display plane on the basis of the output of the image sensor including the information of the positions of the ~~image of the known~~ characteristic points on the image plane; and

_____generating a signal to be transmitted to the image display to cause a change in the image of the virtual reality space on the display plane depending on the attitude calculated by the processor.

32. (Original) A computer-readable medium having computer-executable instructions for performing the steps recited in claim 31.